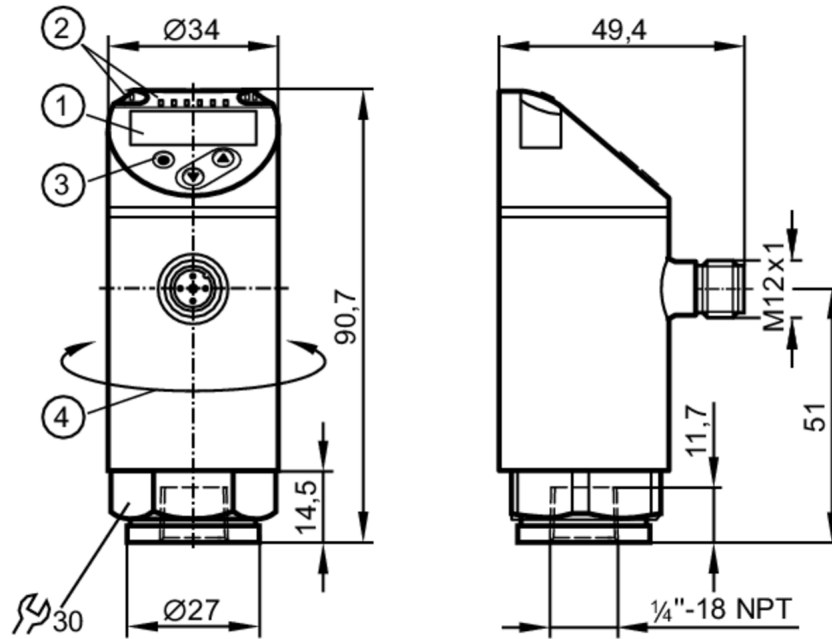


PN2297



Pressure sensor with display

PN-001BREN14-MFRKG/US/ IV



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / Switching status
- 3 Programming button
- 4 upper part of the housing can be rotated 345°



Application

Measuring element	ceramic-capacitive pressure measuring cell		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-25...80		
Pressure rating	10000 mbar	145 psi	1000 kPa
Min. bursting pressure	30000 mbar	450 psi	3000 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
MAWP (for applications according to CRN) [bar]	10		
MAWP (for applications according to CRN)	10000 mbar	145 psi	1000 kPa

Electrical data

Operating voltage [V]	18...30 DC; (according to EN 50178 SELV/PELV)		
Current consumption [mA]	< 35		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Power-on delay time [s]	0.3		
Integrated watchdog	yes		



Pressure sensor with display

PN-001BREN14-MFRKG/US/ IV

Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	switching signal; analog signal; IO-Link; (configurable)		
Electrical design	PNP/NPN		
Number of digital outputs	2		
Output function	normally open / closed; (configurable)		
Max. voltage drop switching output DC [V]	2		
Permanent current rating of switching output DC [mA]	250		
Switching frequency DC [Hz]	< 500		
Number of analog outputs	1		
Analog current output [mA]	4...20; (scalable 1:5)		
Max. load [Ω]	500		
Analog voltage output [V]	0...10; (scalable 1:5)		
Min. load resistance [Ω]	2000		
Short-circuit protection	yes		
Type of short-circuit protection	yes (non-latching)		
Overload protection	yes		
Measuring/setting range			
Measuring range	-50...1000 mbar	-0.72...14.5 psi	-5...100 kPa
Set point SP	-44...1000 mbar	-0.64...14.5 psi	-4.4...100 kPa
Reset point rP	-48...996 mbar	-0.7...14.44 psi	-4.8...99.6 kPa
Analog start point	-50...800 mbar	-0.72...11.6 psi	-5...80 kPa
Analog end point	150...1000 mbar	2.18...14.5 psi	15...100 kPa
in steps of	2 mbar	0.02 psi	0.2 kPa
Accuracy / deviations			
Switch point accuracy [% of the span]	< ± 0,4; (Turn down 1:1)		
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)		
Characteristics deviation [% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)		
Hysteresis deviation [% of the span]	< ± 0,1; (Turn down 1:1)		
Long-term stability [% of the span]	< ± 0,05; (Turn down 1:1; per 6 months)		
Temperature coefficient zero point [% of the span / 10 K]	0,2; (-25...80 °C)		
Temperature coefficient span [% of the span / 10 K]	0,2; (-25...80 °C)		

PN2297



Pressure sensor with display

PN-001BREN14-MFRKG/US/ IV

Reaction times		
Response time	[ms]	< 1.5
Delay time programmable dS, dr	[s]	0...50
Damping for the switching output dAP	[s]	0...4
Damping for the analog output dAA	[s]	0...4
Max. response time analog output	[ms]	3
Software / programming		
Parameter setting options	hysteresis / window; normally open / closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
IO-Link device ID	475 d / 00 01 db h	
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis	
SIO mode	yes	
Required master port class	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time	[ms]	2.3
Operating conditions		
Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100
Protection	IP 65; IP 67	
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF	[years]	138
UL approval	UL approval number	J012
Pressure equipment directive	sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	222
Material	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4404 / 316L); Al2O3 (ceramics); FKM	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	> 50; (Depends on lubrication, seal and pressure rating)
Process connection	threaded connection 1/4 NPT Internal thread	
Restrictor element integrated	no (can be retrofitted)	

PN2297



Pressure sensor with display

PN-001BREN14-MFRKG/US/ IV

Displays / operating elements

Display	Display unit	4 x LED, green (mbar, kPa, psi, inH2O)
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, red/green 4-digit

Remarks

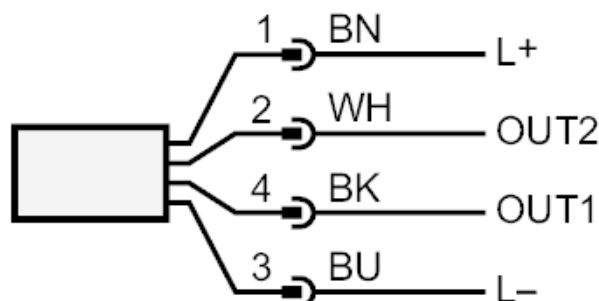
Pack quantity	1 pcs.
---------------	--------

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



Connection



OUT1 Switching output

OUT2 Switching output

 analog output

Core colors :

BK = black

BN = brown

BU = blue

WH = white